

MAGNETIC RANDOM ACCESS MEMORY DEVICE

ABSTRACT OF THE DISCLOSURE

A magnetic random access memory device includes a digit line, a bit line, and a magnetic memory cell disposed in an intersection between the digit line and the bit line. The digit line is extended in a first direction on a substrate. The bit line is extended in a second direction on the substrate. The magnetic memory cell includes a rectangular free magnetic layer magnetized in a direction according to an externally applied magnetic field. A major axis of the rectangular free magnetic layer is substantially parallel to the first direction, and a minor axis of the rectangular free magnetic layer is substantially parallel to the second direction. Thus, multiple input/output program (write) operations and multiple input/output repair operations may be effectively performed.